1. Apparatus for controlling the temperature of a wafer for chemical mechanical polishing operations, the apparatus comprising:

a wafer carrier having a wafer mounting surface configured with an area corresponding to an entire area of the wafer;

a thermal energy transfer unit on the wafer carrier and configured to direct high intensity light energy onto the entire area of the wafer;

a thermal energy detector on the wafer carrier for detecting the temperature of the wafer; and

a controller responsive to the detector for controlling the light energy from the thermal energy transfer unit.

2. An apparatus as recited in claim 2, wherein:

the thermal energy transfer unit comprises a tungsten halogen light source co-extensive with the entire area of the wafer.

3. An apparatus as recited in claim 1, the apparatus further comprising:

passageways through the wafer carrier to locations adjacent to the wafer to supply slurry to the wafer; and

wherein the thermal energy transfer unit comprises first and second thermal energy transfer devices, the first device comprising a high intensity light source configured to distribute the high intensity light energy uniformly onto the entire area of the wafer, and

wherein the second device comprises apparatus separate from the first device for transferring thermal energy relative to the slurry.

4. Apparatus as recited in claim 3, further comprising:

a second thermal energy detector on the wafer carrier for detecting the temperature of the slurry; and

wherein the controller is responsive to the second detector for controlling the supply of thermal energy to the second thermal energy transfer device to control the temperature of the slurry.

5. An apparatus as recited in claim 1, wherein the thermal energy transfer unit comprises first and second thermal energy transfer units, wherein the thermal energy transfer unit configured to direct high intensity light is the first thermal energy transfer unit, the apparatus further comprising:

a slurry supply configured to distribute slurry to an exposed surface of the wafer;

the second thermal energy transfer unit being configured to transfer thermal energy relative to slurry; and

a second thermal energy detector on the wafer carrier for detecting the temperature of the slurry;

wherein the controller is responsive to both of the first and second detectors for controlling the respective first and second thermal energy transfer units to control the temperature of the respective wafer and supplied slurry.

6. An apparatus as recited in claim 1, further comprising:

a wafer mounting film provided on the wafer mounting surface to support the wafer, the wafer mounting film being thermally configured with a coefficient of thermal conductivity that varies with position relative to the wafer mounting surface; and

wherein the high intensity light energy directed onto the entire area of the wafer is transferred to various parts of the area of the wafer according to the variation of the coefficient of thermal conductivity.

7. Apparatus for controlling the temperature of a wafer for chemical mechanical polishing operations, the apparatus comprising:

a wafer carrier having a wafer mounting surface, the wafer carrier being configured to supply slurry adjacent to the wafer;

a thermal energy transfer unit on the wafer carrier for transferring energy relative to the slurry to provide a controlled temperature of the slurry supplied adjacent to the wafer;

a thermal energy detector on the wafer carrier for detecting the temperature of the slurry; and

a controller responsive to the detector for controlling the supply of thermal energy to the thermal energy transfer unit.

8. An apparatus as recited in claim 7, wherein:

the configuration of the wafer carrier comprises at least one passageway to

guide the slurry toward the wafer; and

the thermal energy detector is located adjacent to the passageway.

9. An apparatus as recited in claim 7, wherein:

the wafer mounting surface corresponds to an entire area of the wafer; and

the thermal energy transfer unit further comprises a high intensity light source configured to distribute high intensity light energy uniformly across the entire area of the wafer.

10. An apparatus as recited in claim 7, wherein:

the wafer mounting surface corresponds to an entire area of the wafer; and

the thermal energy transfer unit further comprises first and second thermal energy transfer devices;

the first device comprising a high intensity light source configured to distribute high intensity light energy uniformly across the entire area of the wafer; and

the second device comprising the thermal energy transfer unit for transferring thermal energy relative to the slurry, the second device being separate from the first device.

11. An apparatus as recited in claim 10, wherein:

the thermal energy detector on the wafer carrier comprises the first and second detectors, wherein the thermal energy detector for detecting the temperature of the slurry is the first thermal energy detector; the apparatus further comprising:

the second thermal energy detector on the wafer carrier being configured for detecting the temperature of the wafer;

wherein the controller is responsive to both of the first and second thermal energy detectors for the controlling the respective first and second thermal energy transfer units independently of each other to control the respective temperatures of the supplied wafer and slurry.

12. An apparatus as recited in claim 10, wherein the high intensity light source is a tungsten halogen lamp.

13. An apparatus as recited in claim 2, further comprising:

a carrier film mounted on the wafer mounting surface; and

wherein the wafer carrier is configured to discharge the slurry having a controlled temperature onto the carrier film.

14. Apparatus for changing the temperature of a wafer for chemical mechanical polishing operations, the apparatus comprising:

a wafer carrier having a wafer mounting surface;

a thermal energy transfer unit carried by the wafer carrier; and

a wafer mounting film mounted on the thermal energy transfer unit, the wafer mounting film being thermally configured with a coefficient of thermal conductivity that varies with position relative to the wafer mounting surface;

wherein the energy distributed from the thermal energy transfer unit toward an entire area of the wafer is transferred to various parts of the entire area of the wafer according to the variation of the coefficient of thermal conductivity.

15. Apparatus as recited in claim 14, further comprising:

a thermal energy detector configured to monitor the temperature of selected areas of the wafer; and

a controller responsive to the detector for controlling the energy transferred by the thermal energy transfer unit toward the entire area of the wafer to control the amount of energy transferred to the various parts of the entire area of the wafer according to the variation of the coefficient of thermal conductivity.